IN THE SPECIFICATION

On page 3, please delete the paragraph beginning at line 22, and replace it with the following paragraph:

B1

Each data element, whether elementary, a sub-assembly or final assembly, is the product of a decision. That is, it is selected from two or more alternatives. For example, the color specified in a product specification might be red, green, or blue. The business plan that includes a $3 million advertising budget could have instead, included one for $2.5 or $2 million. Or it could have included separate line items for advertising by geographic region, or by type of media, or by product line, or various combinations of these possibilities. What it does contain is a matter of choice (i.e., a decision) and results in data.

On page 6, please delete the paragraph beginning at line 5, and replace it with the following paragraph:

B2

In the '80's "participative management" was superseded by the coming of "teams" with similar results. It is often at least useful, and perhaps essential, for a group of people to work together interactively-as a team. It is seldom adequate however, to roundup a group, anoint them with "teamhood," provide team T-shirts and send them off to play the game. The football, basketball, and other teams that provide the model for organizational teams, don't usually play the game without considerable investment in learning how to "block and tackle" and *then* practicing the "blocking and tackling" repeatedly until they do it *really* well. They also develop "play books" and shared understanding of cryptic signals. They learn to anticipate each others moves, again as a result of much practice together. Where are the organizational equivalents of these indispensable requirements for the success of athletic teams? What one usually finds is a one day, or at most one week course, followed by a

B2 return to the workplace bearing an appropriately emblazoned coffee mug and plaque for the wall.

On page 7, please delete the paragraph beginning at line 9, and replace it with the following paragraph:

B3 We need a method to analyze, specify and support work processes that consist of many, interdependent decisions, at least some of which require collaboration among multiple participants for satisfactory results. This is at least part of an answer to two critical problems currently faced by most complex organizations -1) How to get better integration of effort across organizational boundaries, both those created within organizations (e.g., between engineering and manufacturing, or eastern sales region and central sales region) and the boundaries between organizations (e.g., customer and supplier, business and government, federal government and state government), and 2) How to improve the performance of managerial and professional work, where such performance may be measured in terms of reliability of the process in producing quality output, the productivity of the process, or the speed of the process.

On page 16, please delete the paragraph beginning at line 11, and replace it with the following paragraph:

B4 A *class* is an abstraction that describes properties important to an application and ignores the rest. ... Each class describes a possibly infinite set of individual objects. Each object is said to be an *instance* of its class. (James Raumbaugh, Michael Blaha, William Premerlani, Frederick Eddy, and William Lorensen, *Object-Oriented Modeling and Design*, Prentice Hall: Englewood Cliffs, NJ, 1991, p. 2)

On page 17, please delete the paragraph beginning at line 8, and replace it with the following paragraph:

B5

The *dynamic model* describes the aspects of a system that change over time. The dynamic model is used to specify and implement the *control* aspects of a system. The dynamic model contains state diagrams. A *state diagram* is a graph whose nodes are *states* and whose arcs are *transitions* between states caused by *events*. ...

On page 19, please delete the paragraph beginning at line 13, and replace it with the following paragraph:

B6

The Framework **99** is constructed from a related set of abstract and concrete object classes that are depicted in **FIG. 6**. The abstract Decision class **100** has members that are classes of decisions which are specific to the application domain. In the example, depicted in **FIG. 4**, all of the boxes representing nodes of the network would be modeled as concrete class instances of the Decision class **100**. This relationship between the abstract Decision class **100** and some of its concrete classes and object instances are more clearly depicted in the upper half of **FIG. 6**. The Data class **101** is also an abstract class that has a one-to-one relationship with the Decision class **100**. The relationship between the abstract Data class **101**, its concrete classes and their object instances is shown in the lower half of **FIG. 6**. Referring again to **FIG. 5**, the other abstract classes of the Framework **99** are Arc Collection **115** and Decision Role **121**. The Arc Collection class **115** has two concrete subclasses, Arc Entry Collection **134** and Arc Exit Collection **136**. The instances of these classes are collections of Directed Arc **107** objects which are instances of another one of the Framework's **99** classes. These two subclasses are differentiated by the end of the Directed Arc **107** object that they use to determine their members; the former using the entry end of the Directed Arc **107** object (the end without the arrowhead in **FIG. 4**) and the latter using the exit end. The abstract Decision Role class **121** has five concrete classes in the preferred implementation, Decision Manager **142**, Consultee **143**, Approver **144**, Inspector **145**, and Informee **146**. These five concrete, subclasses model the

B6

behaviors and responsibilities described in **Table A**. As indicated in **FIG. 5**, there will be exactly one Decision Manager **142** related to each Decision **100**. There may or may not be any Position **119** designated to participate in a Decision **100** in any of the other four roles **143**, **144**, **145**, and **146**. Nor is there a limit on the number of Positions **119** that may participate **120** in any of these latter four roles. The final classes of the Framework **99** are the concrete classes Position **119** and Person **116** which model the organization and the incumbents of the organization respectively.

On page 20, please delete the paragraph beginning at line 22, and replace it with the following paragraph:

B7

The Framework **99** depicted in **FIG. 5** has both abstract and concrete classes but no objects. Two of its classes do not have any concrete classes. **FIG. 7** depicts classes and objects of a hypothetical Process Model **129** derived from the Framework and based on the example depicted in **FIG. 4**. In addition to the elements of the Framework depicted in **FIG. 5**, the Process Model **129** has concrete subclasses Cost **10**, Price **11**, Terms **12** etc. of the of the abstract Data class **101**, and concrete subclasses Cost ? **14**, Price ? **15**, Terms ? **16** etc. of the of the abstract Decision class **100**. (the short broken lines **13** and **17** indicate that there are other concrete subclasses of these two abstract classes which have been omitted for clarity.) The Framework **99** abstracts the desired behavior common to all decision processes whether they be a proposal preparation process, a product development process, or a strategic planning process. The Process Model **129** is more concrete and specific. It abstracts only those desired behaviors that are common to the particular decision process being modeled, in the example illustrated in **FIG. 4**, **FIG. 6**, and **FIG. 7**, the proposal preparation process of the organization or organizations that use this particular process. The Process Model **129** also includes the objects which are instances of the concrete classes Directed Arc **107**, Arc Entry Collection **134**, Arc

B7

Exit Collection **136**, Position **119**, and the five concrete subclasses of the Decision Role class **121** to the extent that any are specified for this particular process.

On page 22, please delete the paragraph beginning at line 20, and replace it with the following paragraph:

B8

Requiring **105** Decisions **100** and their dependencies upon producing **110** Decisions **100** are connected by Directed Arcs **107** with an entry at the end of the arc connected to its respective producing **110** Decision **100** and an exit at the end of the arc connected to its requiring **105** Decision **100**. Each Directed Arc **107** is a member **133** of one Arc Entry Collection **134** comprised of **133** all and only those Directed Arcs **107** which have the same producing Decision **110**. Each Directed Arc **107** is also a member **135** of one Arc Exit Collection **136** comprised of **135** all and only those Directed Arcs **107** which have the same requiring Decision **105**. Arc Entry Collections **134** and Arc Exit Collections **136** are specializations of the Arc Collection **115** class, which specialization is based on whether the class is defined by its entry **109** relationship or its exit **108** relationship.

On page 23, please delete the paragraph beginning at line 27, and replace it with the following paragraph:

B9

(1) Decision Role **121** applicability **125**: "IF {product category] = {lawn care}, THEN {Decision Manager} = {Product Manager, Lawn Care}, ELSE IF {product category} = {snow blowers}, THEN {Decision Manager} = {Product Manager, Snow Handling}, ELSE {Decision Manager} = {Marketing Manager};"